

Application No. 10/527,635
Reply to Office Action of January 27, 2006

Docket No.: 13111-00007-US

REMARKS

Applicant respectfully requests reconsideration in view of the amendment and following remarks. Support for newly added claim 12 can be found in the original claim 3. Claims 1-5 and 8-11 are rejected under 35 U.S.C. §103(a) as being obvious over Ahlers et al. (US 6,852,661) "Ahlers". Claims 1-7 and 10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 13 of copending Application No. 10/473,216. The applicant respectfully traverses these rejections.

35 U.S.C. §103 REJECTION

Claims 1-5 and 8-11 are rejected under 35 U.S.C. §103(a) as being obvious over Ahlers. The applicant points out that the PCT counterpart to Ahlers is a better reference because of its publication date. The applicant cannot antedate the publication date of Ahlers PCT application.

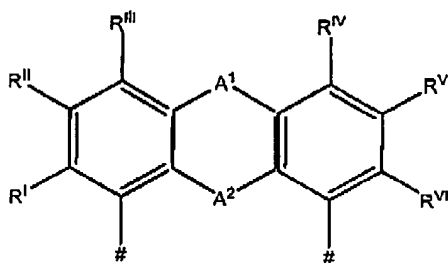
The applicant does not agree with the Examiner that the generic structure of the ligands according to Ahlers encompasses the ligands employed in the process according to the above-identified application.

According to claim 1 of the above-identified application a chelating pnictogen ligand of the formula 1 is employed, wherein

- two groups with pnictogen atoms Pn (is selected among the elements As, Sb and P) are linked by a bridging group Q (and optionally an oxygen atom between Pn and Q),
- of the further substituents R¹, R², R³ and R⁴ bound to the pnictogen atoms at least R¹ and R³ are pyrrole groups bound via the nitrogen atom to the pnictogen atom (i.e. if the pnictogen atom is a phosphorus atom a phosphinamidite group is formed)
- bridging group Q has a xanthene like framework (c = 0)

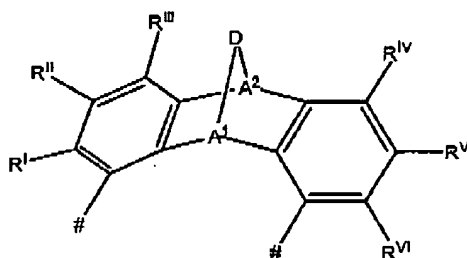
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(# = linkage to the groups with pnictogen atoms)

or a tritycene like framework (c = 1)



(D = divalent bridging group)

Ahlers discloses three different types of phosphinamidite ligands 1.1, 1.2 and 1.3 (see col. 2, l. 50 -64). Ligands 1.1 are monodentate ligands (they have only one phosphorus atom and no bridging group). Ligands 1.2 have a bridging group of the formula $-X^2-B-X^3-$, wherein X^2 and X^3 are 5 to 8-membered heterocycles which contain at least one nitrogen atom bound directly to the phosphorus atom. Here two phosphinamidite groups are part of the bridging group (whereas claim 1 of the above-identified application teaches that a xanthene or triptycene bridge is bound directly or optionally by an oxygen atom (a and/or b = 1) to the pnictogen atom). Ligands 1.3 have a bridging group, wherein each phosphorus atom is linked via an oxygen containing heterocycle (and not a single oxygen atom) to a divalent group B.

Further, the definition of divalent bridging group B according to Ahlers (col. 5, line 4- col. 6, line 67) does not include xanthene or triptycene bridges. B can be or contain an alkylene

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bridge D, which is derived from C₁-C₁₀ alkylene bridges (col. 5, lines 6-24). This alkylene bridges may bear two aryl groups fused onto it (col. 5, lines 16-18; col. 6, structures II.2 - II.5), but does not form a polycyclic ring system of three or four rings, as in a xanthene or triptycene ring system. In fact, the ligands according to Ahlers are structurally remote from the ligands according to the above-identified application.

There is also not the least incentive in the Ahlers reference to modify the bridging group of all structural elements of the ligands and to employ the thus modified ligands for the hydroformylation of compounds having at least two unsaturated double bonds. For the above reasons, this rejection should be withdrawn.

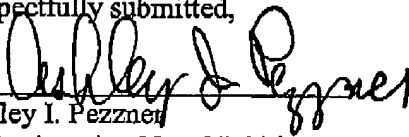
Double Patenting

In order to expedite prosecution, the applicant has enclosed an executed terminal disclaimer which will obviate this rejection.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

A two month extension has been paid. Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 13111-00007-US from which the undersigned is authorized to draw.

Respectfully submitted,

By 
Ashley I. Pezzner

Registration No.: 35,646

CONNOLLY BOVE LODGE & HUTZ LLP

Correspondence Customer Number: 23416

Attorney for Applicant

Enclosure: two month extension
Terminal disclaimer

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